

PATENT COOPERATION TREATY

PCT



INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference PP0106-PCT	FOR FURTHER ACTION See Form PCT/IPEA/416	
International application No. PCT/KR2004/003311	International filing date(day/month/year) 15 DECEMBER 2004 (15.12.2004)	Priority date (day/month/year) 15 DECEMBER 2003 (15.12.2003)
International Patent Classification (IPC) or national classification and IPC F41A 33/02(2006.01)i		
Applicant HANRIM SCIENCE & TECHNOLOGY et al		

1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.
2. This REPORT consists of a total of <u>4</u> sheets, including this cover sheet.
3. This report is also accompanied by ANNEXES, comprising: <ul style="list-style-type: none"> a. <input type="checkbox"/> (sent to the applicant and to the International Bureau) a total of _____ sheets, as follows: <ul style="list-style-type: none"> <input type="checkbox"/> sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions). <input type="checkbox"/> sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box. b. <input type="checkbox"/> (sent to the International Bureau only) a total of (indicate type and number of electronic carrier(s)) _____ containing a sequence listing and/or tables related thereto, in electronic form only, as indicated in the Supplemental Box relating to Sequence Listing (see Section 802 of the Administrative Instructions).
4. This report contains indications relating to the following items: <ul style="list-style-type: none"> <input checked="" type="checkbox"/> Box No. I Basis of the report <input type="checkbox"/> Box No. II Priority <input type="checkbox"/> Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability <input type="checkbox"/> Box No. IV Lack of unity of invention <input checked="" type="checkbox"/> Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement <input type="checkbox"/> Box No. VI Certain documents cited <input type="checkbox"/> Box No. VII Certain defects in the international application <input type="checkbox"/> Box No. VIII Certain observations on the international application

Date of submission of the demand 13 JULY 2005 (13.07.2005)	Date of completion of this report 27 MARCH 2006 (27.03.2006)
Name and mailing address of the IPEA/KR  Korean Intellectual Property Office 920 Dunsan-dong, Seo-gu, Daejeon 302-701, Republic of Korea Facsimile No. 82-42-472-7140	Authorized officer LEE, Seok Bum Telephone No. 82-42-481-5418 

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International application No.

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Box No. 1 Basis of the report

1. With regard to the **language**, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.

- ☒ This report is based on translations from the original language into the following language English which is the language of a translation furnished for the purposes of:
- ☐ international search (under Rules 12.3 and 23.1(b))
- ☒ publication of the international application (under Rule 12.4)
- ☐ international preliminary examination (under Rules 55.2 and/or 55.3)

2. With regard to the **elements** of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report)*:

- ☒ the international application as originally filed/furnished
- ☐ the description:
pages _____ as originally filed/furnished
pages* _____ received by this Authority on _____
pages* _____ received by this Authority on _____
- ☐ the claims:
pages _____ as originally filed/furnished
pages* _____ as amended (together with any statement) under Article 19
pages* _____ received by this Authority on _____
pages* _____ received by this Authority on _____
- ☐ the drawings:
pages _____ as originally filed/furnished
pages* _____ received by this Authority on _____
pages* _____ received by this Authority on _____
- ☐ the sequence listing and/or any related table(s) - see Supplemental Box Relating to Sequence Listing.

3. ☐ The amendments have resulted in the cancellation of:

- ☐ the description, pages _____
- ☐ the claims, Nos. _____
- ☐ the drawings, sheets _____
- ☐ the sequence listing (*specify*): _____
- ☐ any table(s) related to sequence listing (*specify*): _____

4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).

- ☐ the description, pages _____
- ☐ the claims, Nos. _____
- ☐ the drawings, sheets _____
- ☐ the sequence listing (*specify*): _____
- ☐ any table(s) related to sequence listing (*specify*): _____

* If item 4 applies, some or all of those sheets may be marked "superseded."

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Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims	1 - 56	YES
	Claims		NO
Inventive step (IS)	Claims	1 - 56	YES
	Claims		NO
Industrial applicability (IA)	Claims	1 - 56	YES
	Claims		NO

2. Citations and explanations (Rule 70.7)

Documents cited in the International Search Report:

D1: US 6,575,753 B2 (Stephen P. Rosa, Motti Shechter, John Clark, Tansel Kendir) 10 Jun. 2003

D2: US 5,316,479 A (John D. E. Wong, Curtis C. Tugnum, James P. Logan) 31 May 1994

D3: US Patent Application Publication 2003/0027103 A1 (Steven G. Preston, James A. Frey, Thomas H. Penner, Edward S. Kaprocki) 6 Feb. 2003

D4: JP 2003-75094 A (Toshiba Electronic Systems Co., Ltd.) 12 Mar. 2003

D5: KR 10-2004-0036472 A (Chi Yen Kim, Jeoung Il Ji) 30 Apr. 2004

The present invention relates to a detecting device used in a multiple integrated laser engagement system and a gun simulation system, and in particular, to a target detecting device of a multiple integrated laser engagement system using a laser light and to a housing of a magazine shape or a simulated magazine used in an arms transmitter as well as to a gun simulation system related thereto.

D1 is a firearm laser training system which includes a laser transmitter assembly, one or more actuable target assemblies each having a target, an interface unit and a computer system. The target assemblies raise and lower targets in accordance with control signals from the computer system.

D2 is a firearm training system which allows the measurement and display as a function of time of the hand grip force pattern applied to the grip of a firearm by a weapon hand of a shooter. This permits the detection of variations in the individual hand grip forces in the pattern during firing of the weapon.

D3 is a combat training system which includes a transmitter of a first electroluminescent signal representative of a projectile fired at a front of a structure, which is detected at the structure's front. An extent of damage that would be expected to be experienced by the structure is determined from the detected first signal. A second electroluminescent signal is transmitted behind the structure that is representative of the expected damage extent.

D4 is to provide a simulated hand-grenade optimum for practice by keeping constant as far as possible the detection range and distance without impairment of directivity on an origin side.

D5 is a survival game system and a controlling method thereof are provided to increase an interest in the game by recognizing a state of a player through the radio frequency communication and recognition data, and analyze a game result, and manage the game data of each player by storing the game state data in a database in realtime.

(Continued on Supplemental Sheet.)

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Supplemental Box

In case the space in any of the preceding boxes is not sufficient.

Continuation of:

Box V.

None of the available prior art discloses a detecting device used in a multiple integrated laser engagement system and a gun simulation system, and in particular, to a target detecting device of a multiple integrated laser engagement system using a laser light and a housing of a magazine shape or a simulated magazine used in an arms transmitter as well as to a gun simulation system. Therefore, the subject matter of the claims 1, 15, 29, 45, 54, 55 and 56 of the present invention is considered new (Art. 33(2) PCT). As dependent claims, the subject matter of the claims 2-14, 16-28, 30-44 and 46-53 is considered new as well (Art. 33(2) PCT).

A detecting device used in a multiple integrated laser engagement system and a gun simulation system is not fairly suggested in the prior art, and is not rendered obvious from the prior art. Therefore, the subject matter of claims 1-56 appears to inventive step (Art. 33(3) PCT).

The present invention is deemed to have an industrial applicability because it can be used in the detecting device used in a multiple integrated laser engagement system industry (Art. 33(4) PCT).